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Cap. 2

# **WATER SUPPLY OUTLOOK FOR MONTANA**



**U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE**

Collaborating with

**MONTANA AGRICULTURAL EXPERIMENT STATION**

AS OF  
**JAN. 1, 1975**

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

*Cover Photo: Cabins near Saacajwea Snow Course  
in Bridger Mountains, Montana.*

SCS PHOTO 11-PABO-15

## PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 111, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

## PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



# **WATER SUPPLY OUTLOOK FOR MONTANA**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

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MONTANA WATER SUPPLY OUTLOOK  
January 1, 1975

\* \* \* \* \*  
\*  
\* The mountain snowpack is generally below average over \*  
\* the entire state. There are a few isolated areas \*  
\* near average. These are the Hyalite Canyon area in \*  
\* the Gallatin River drainage, an area near Red Lodge, \*  
\* portions of the Little Belt Mountains, and the area \*  
\* along the Montana Idaho line on the west side of the \*  
\* Bitterroot River drainage. Most areas in the state \*  
\* have only two-thirds to three-quarters of the normal \*  
\* snowpack for this time of year. Mountain soils beneath \*  
\* the snowpack are generally drier than usual. There are \*  
\* some portions in the Gallatin and Yellowstone River \*  
\* drainages where moisture conditions are near average. \*  
\* Soils are frozen in many areas which are not normally \*  
\* frozen at this time of year. This is a result of late \*  
\* snow accumulations and below average amounts of snow- \*  
\* pack now on the ground. \*  
\*  
\* Streamflow next spring and summer will be below aver- \*  
\* age in most drainages unless precipitation patterns \*  
\* improve considerably during the succeeding snow \*  
\* accumulation months. \*  
\*  
\* \* \* \* \*

COLUMBIA RIVER DRAINAGE

Snow - The early season snowpack is below average in almost all drain-  
ages. The west side of the Bitterroot River drainage has near average  
snowpack. In some areas of the Clark Fork drainage, the January 1  
snowpack is approximately one-half the long term average. There  
were no snow survey measurements made in the Kootenai River drainage.  
Moisture in the soil beneath the snowpack is generally below average  
in all drainages.

Streamflow - Volume streamflow forecasts will be released after the  
completion of the February 1 snow surveys when the snowpack trend has  
become better defined. Present snowpack would indicate below average  
runoff can be expected for almost all drainages in this area unless  
precipitation exceeds the normal amount.



#### MISSOURI RIVER DRAINAGE

Snow - The mountain snowpack in the majority of the Missouri River drainage is below average. Some places that received heavy snowpack in early winter have remained high. These areas are generally confined to small drainages and presently appear to exist in the Continental Divide area south of Butte, the Hyalite drainage south of Bozeman, and portions of the Little Belt Mountains. Remaining areas of the Missouri River drainage have one-half to three-quarters of the normal snowpack. Soils under the snowpack are generally drier than usual. Exceptions to this condition are the lower portion of the Gallatin River drainage.

#### YELLOWSTONE RIVER DRAINAGE

Snow - Snowpack in the headwaters of the Yellowstone River drainage is below average. The one exception is in the vicinity of Red Lodge where early season snowfall has remained and has resulted in a snowpack near average for this time of year. In the headwaters of the Yellowstone River drainage in Yellowstone National Park, most of the snow courses have only about one-half of their normal snowpack for this time of year. Soils are generally drier than normal except in the portion of the Crazy Mountains area. With the present moisture and snowpack conditions, it appears the streamflow for the coming spring and summer months will be below average. Volume forecasts will be released after completion of the February 1 snow surveys when the snow pattern becomes more defined.

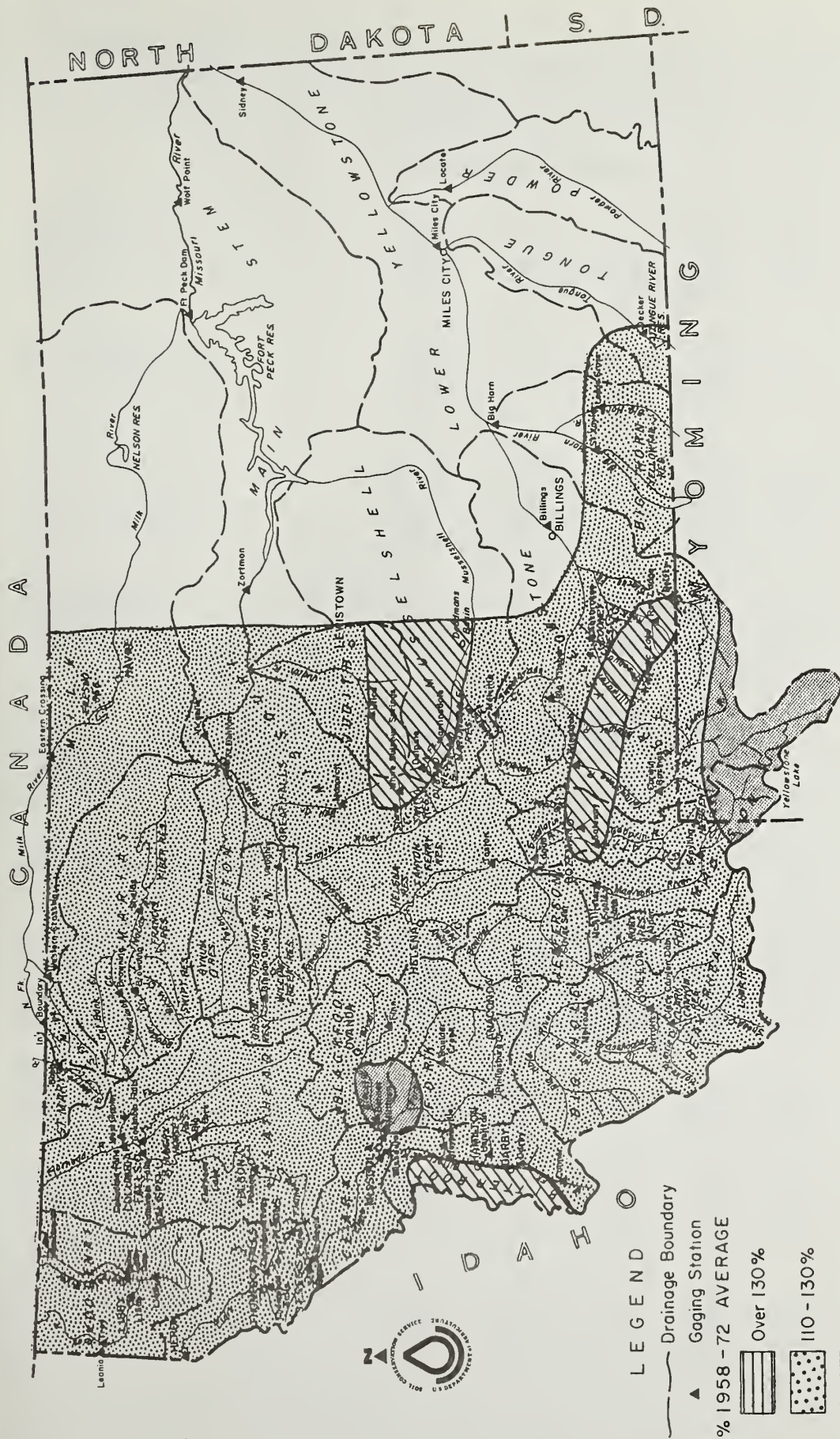


# SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

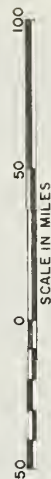
RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
<u>COLUMBIA RIVER DRAINAGE</u>			
Kootenai	-	-	-
Flathead	4	63	75
Upper Clark Fork	9	69	76
Lower Clark Fork	4	58	79
Bitterroot	5	65	88
<u>MISSOURI RIVER DRAINAGE</u>			
Jefferson	11	71	76
Madison	8	51	67
Gallatin	9	78	88
Missouri Main Stem	7	83	81
Judith-Musselshell	4	88	96
Marias-Teton-Sun	1	72	69
Milk (Headwaters)	-	-	-
<u>YELLOWSTONE RIVER DRAINAGE</u>			
Yellowstone	15	63	72
Little Big Horn	-	-	-
-3-			







MONTANA



MOUNTAIN SNOW WATER EQUIVALENT  
AS OF  
JANUARY 1, 1975





**SOIL MOISTURE**      November 1, 1974

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †

COLUMBIA RIVER BASIN
Kootenai

Baree Trail	3800	48	7.5	11/1	2.4	6.1	5.8
Murphy Lake R. S.	3000	48	22.6	11/5	18.6	18.2	18.8
Raven	3050	48	23.0	11/1	12.1	13.1	16.8

Flathead

Desert Mountain	5600	54	8.4	10/29	4.7	6.9	6.6
Marias Pass	5250	54	6.5	10/29	3.1	3.3	4.5

Clark Fork

Black Pine	7100	48	10.0	10/30	7.4	8.1	7.9
Lubrecht Forest	4100	48	26.8	11/6	13.6	13.5	14.2
Seeley Lake R. S.	4030	48	11.9	11/5	4.0	3.8	4.4
Skalkaho Summit	7260	48	10.8	10/31	9.6	9.9	10.1

Bitterroot

Gibbons Pass	7100	48	7.1	10/31	3.1	3.9	4.9
Lolo Pass	5250	48	10.6	10/30	2.7	3.7	5.3

MISSOURI RIVER BASIN
Beaverhead

Lakeview	6700	48	15.3	10/31	8.2	14.3	8.3
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Madison

West Yellowstone	6700	48	6.5	10/29	1.8	3.0	2.8
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Gallatin

Bridger Bowl	7250	48	17.0	10/31	15.0	15.3	15.5
College Site No. 2	4856	54	17.7	11/1	13.6	12.0	10.9
Lick Creek	6860	48	18.8	10/30	12.3	13.2	17.2
Twenty-One Mile	7150	48	10.0	10/29	3.2	6.6	5.3

Missouri Main Stem

Kings Hill	7420	48	11.8	11/1	9.5	8.6	7.5
Stemple Pass	6350	48	5.9	11/1	3.1	4.1	4.0

Milk

Beaver Creek	3950	48	20.9	10/30	7.6	7.3	7.4
Rocky Boy	4700	36	10.1	10/30	8.2	6.3	7.5

Yellowstone

Battle Ridge	6020	48	17.6	10/31	8.4	9.7	11.9
Northeast Entrance	7350	48	9.4	10/29	4.0	5.5	6.7
PMC Dryland	3700	48	20.7	10/28	5.5	7.1	-



**SOIL MOISTURE** December 1, 1974

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †

COLUMBIA RIVER BASIN
Kootenai

Baree Trail	3800	48	7.5	12/2	6.3	6.6	6.2
Murphy Lake R. S.	3000	48	22.6	12/1	18.8	19.2	19.2
Raven	3050	48	23.0	12/2	14.2	15.8	18.3

Flathead

Desert Mountain	5600	54	8.4	-	-	-	-
Marias Pass	5250	54	6.5	11/26	3.8	5.2	4.8

Clark Fork

Black Pine	7100	48	10.0	12/2	7.2	8.1	7.9
Lubrecht Forest	4100	48	26.8	12/4	13.8	14.9	14.6
Seeley Lake R. S.	4030	48	11.9	12/2	4.4	7.2	5.5
Skalkaho Summit	7260	48	10.8	12/2	9.4	10.0	-

Bitterroot

Gibbons Pass	7100	48	7.1	11/29	3.4	5.1	4.9
Lolo Pass	5250	48	10.6	11/27	3.2	6.6	6.0

MISSOURI RIVER BASIN
Beaverhead

Lakeview	6700	48	15.3	12/2	8.2	17.5	9.3
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Madison

West Yellowstone	6700	48	6.5	11/28	1.7	3.0	2.8
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Gallatin

Bridger Bowl	7250	48	17.0	12/3	14.9	15.3	15.5
College Site No. 2	4856	54	17.7	11/29	15.2	16.0	12.7
Lick Creek	6860	48	18.8	12/3	12.9	15.6	16.5
Twenty-One Mile	7150	48	10.0	11/30	3.1	8.3	4.7

Missouri Main Stem

Kings Hill	7420	48	11.8	11/29	7.7	8.5	7.4
Stemple Pass	6350	48	5.9	12/2	3.2	5.0	4.1

Milk

Beaver Creek	3950	48	20.9	11/25	7.4	7.5	7.5
Rocky Boy	4700	36	10.1	11/25	9.4	7.6	7.5

Yellowstone

Battle Ridge	6020	48	17.6	12/3	9.5	12.1	12.8
Northeast Entrance	7350	48	9.4	12/1	3.9	5.8	6.7
PMC Dryland	3700	48	20.7	12/2	7.7	7.5	-



**SOIL MOISTURE**     January 1, 1975

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †

COLUMBIA RIVER BASIN
Kootenai

Baree Trail	3800	48	7.5	-	-	6.4	6.5
Murphy Lake R. S.	3000	48	22.6	1/2	19.2	19.7	19.4
Raven	3050	48	23.0	-	-	15.4	18.0

Flathead

Desert Mountain	5600	54	8.4	12/30	5.8	8.6	7.0
Marias Pass	5250	54	6.5	12/29	3.9	5.2	4.8

Clark Fork

Black Pine	7100	48	10.0	12/31	7.0	8.2	7.5
Lubrecht Forest	4100	48	26.8	1/2	13.7	15.1	13.7
Seeley Lake R. S.	4030	48	11.9	1/2	4.8	8.1	6.2
Skalkaho Summit	7260	48	10.8	12/30	9.5	-	-

Bitterroot

Gibbons Pass	7100	48	7.1	12/30	3.4	5.2	4.7
Lolo Pass	5250	48	10.6	12/24	3.3	6.2	6.0

MISSOURI RIVER BASIN
Beaverhead

Lakeview	6700	48	15.3	1/2	8.2	17.3	9.2
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Madison

West Yellowstone	6700	48	6.5	1/1	1.7	3.0	2.7
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Gallatin

Bridger Bowl	7250	48	17.0	12/27	15.0	15.2	15.6
College Site No. 2	4856	54	17.7	1/3	15.2	16.1	12.9
Lick Creek	6860	48	18.8	12/31	13.2	15.1	16.0
Twenty-One Mile	7150	48	10.0	12/31	3.1	8.0	4.6

Missouri Main Stem

Kings Hill	7420	48	11.8	12/30	7.4	8.5	7.0
Stemple Pass	6350	48	5.9	12/31	3.4	4.9	4.0

Milk

Beaver Creek	3950	48	20.9	12/31	7.5	7.7	7.4
Rocky Boy	4700	36	10.1	12/31	8.3	8.7	7.1

Yellowstone

Battle Ridge	6020	48	17.6	12/27	8.8	13.9	12.8
Northeast Entrance	7350	48	9.4	12/26	3.7	5.8	6.4
PMC Dryland	3700	48	20.7	12/30	6.9	6.9	-





# RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average

## COLUMBIA RIVER BASIN

Kootenai	Koocanusa	4,965.0	2,922.0	2,388.0	-
Flathead	Hungry Horse	3,428.0	2,162.0	2,604.0	2,766.0
	Flathead Lake	1,791.0	1,479.0	1,386.0	1,423.0
	Camas (4)	45.2	16.8	11.0	22.1
	Mission Valley (8)	100.3	27.2	34.9	31.4
Clark Fork	Georgetown Lake	31.0	25.7	21.8	27.9
	Lower Willow Creek	4.6	1.1	0.7	1.1
	Nevada Creek	12.6	-	-	4.3
	Noxon Rapids	334.6	321.2	295.4	320.5
Bitterroot	Como	34.9	4.8	-	8.0
	Painted Rocks	31.7	-	0.0	23.5

## MISSOURI RIVER BASIN

Beaverhead	Clark Canyon	328.9	97.6	133.9	138.9
	Lima	84.0	41.7	49.3	31.2
Ruby	Ruby	38.8	-	-	20.0
Madison	Hebgen Lake	377.5	249.5	229.8	201.9
	Ennis Lake	41.0	33.9	36.1	36.7
Gallatin	Middle Creek	8.0	3.1	3.2	3.0
Missouri	Canyon Ferry	2,043.0	1,687.0	1,773.0	1,717.0
	Hauser & Helena	61.9	63.6	62.5	59.6
	Lake Helena	10.4	11.1	10.7	9.6
	Holter Lake	81.9	81.2	78.3	71.3
	Smith River	10.7	9.2	1.8	5.7
	Bair	7.0	5.9	0.8	4.0
	Martinsdale	23.1	14.7	4.8	7.6
	Deadman's Basin	72.2	44.4	29.8	41.2
	Fort Peck Lake	19,410.0	16,290.0	15,720.0	13,450.0
Sun	Gibson	105.0	56.3	17.5	36.9
	Willow Creek	32.3	24.2	18.9	18.6
	Pishkun	32.0	17.9	3.8	17.7
Marias	Lower Two Medicine	16.6	-	-	-
	Four Horns	19.2	-	-	-
	Swift	30.0	7.5	8.6	14.1
	Lake Frances	112.0	30.7	34.2	78.1
	Tiber	1,347.0	507.7	509.8	579.1
Milk	Beaver Creek	3.5	-	-	-
	Fresno	127.2	90.1	11.0	59.0
	Nelson	66.8	50.2	20.4	44.4
	Lake Sherburne	66.1	15.3	27.0	16.5
Yellowstone	Mystic Lake	20.8	9.7	15.1	14.1
	Tongue River	68.0	28.8	-	25.8
	Cooney	27.5	12.2	-	13.4
Big Horn	Big Horn	1,356.0	909.2	962.5	880.8



## SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
					Last Year	Average
NAME	Elevation					
ARCH FALLS	7350	12/31	28	6.7	5.8	5.5
BATTLE RIDGE	6020	12/27	11	2.2	4.4	3.0
BEAR PAW SKI AREA	5200	12/31	13	2.4	2.3	2.6
BIG COULEE	5100	1/02	11	2.5	2.4	-
BLACK BEAR	7950	12/30	48	10.7	24.9	-
BLACK BEAR PILLOW	7950	12/30	SP	10.4	22.5	-
BLACK PINE	7100	12/31	17	3.7	7.2	3.4
BLACK PINE PILLOW	7100	12/26	SP	3.9	6.8	5.4
BRIDGER BOWL	7250	12/27	31	7.8	12.0	12.0
BRIDGER BOWL PILLOW	7250	12/27	SP	7.5	13.4	13.2
BILL MOUNTAIN	6600	1/02	10	1.9	-	-
CANYON (WY)	7750	1/01	19	3.2	7.1	6.1
CARROT BASIN	9000	1/02	49	12.9	21.7	17.0
CARROT BASIN PILLOW	9000	1/02	SP	9.1	17.3	10.9
CHESSMAN RESERVOIR	6200	12/27	4	.8	1.0	1.3
COLE CREEK	7850	12/24	35	9.8	-	-
COLE CREEK PILLOW	7850	12/24	SP	8.6	-	-
COMBINATION	5600	12/31	6	.8	4.8	2.6
COMBINATION PILLOW	5600	12/31	SP	1.5	4.4	-
COOKE STATION	8150	12/26	26	6.0	7.6	-
COYOTE HILL	4200	1/02	19	3.8	4.6	4.5
DALY CREEK	5780	1/02	17	3.4	-	-
DEADMAN CREEK	6450	12/30	20	4.6	4.8	4.3
DEADMAN CREEK PILLOW	6450	12/30	SP	4.5	5.9	4.8
DESERT MOUNTAIN	5600	12/30	23	6.0	10.8	7.3
DEVILS SLIDE	8100	12/31	42	10.7	11.3	10.1
DIX HILL	6400	12/30	13	2.6	-	-
FISHER CREEK	9100	12/26	44	10.8	18.1	14.4
FISHER CREEK PILLOW	9100	12/26	SP	11.2	19.2	14.8
FIFECR RIDGE	7500	1/02	16	3.2	-	-
FROHNER MEADOWS	6480	12/26	10	2.3	4.4	-
FROHNER MEADOWS PILLOW	6480	12/26	SP	2.4	4.6	-
GIBBONS PASS	7100	12/30	36	6.8	11.5	9.5
GRIZZLY PEAK	8400	12/24	34	9.5	6.9	8.7
HEART LAKE TRAIL	4800	12/27	40	8.3	11.7	8.7
HERGEN DAM	6550	1/02	23	4.6	6.2	4.6
HIGHWOOD DIVIDE	5650	1/02	14	3.5	4.3	-
HIGHWOOD STATION	4600	1/02	8	1.5	1.1	-
HOOD MEADOW	6600	12/31	25	6.2	4.7	4.5
HOODOO BASIN	6000	12/27	66	17.0	30.0	20.8
HOODOO CREEK	5900	12/27	63	13.9	24.9	18.9
KIWANIS CAMP	3720	12/31	9	1.2	.0	-
LAKE CAMP (WY)	7850	12/31	15	1.8	4.7	3.5
LAKE CREEK	6100	1/02	21	3.8	4.4	-
LAKEVIEW CANYON	6930	12/31	22	4.0	6.7	5.4
LAKEVIEW RIDGE	7400	12/31	19	3.6	6.7	5.0
LYCK CREEK	6860	12/31	25	4.9	4.2	3.9
LYCK CREEK PILLOW	6860	12/31	SP	4.8	4.0	4.0

Average based On 1958-72 period. A - Aerial observation; water content estimated.

SP - Snow Pillow observation; water content only.



# SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Elevation				Last Year	Average
LOST HORSE	5940	12/31	50	11.1	17.3	12.0
LUBRECHT FLUME	4800	12/31	9	1.5	3.5	3.1
LUBRECHT FLUME PILLOW	4800	12/31	SP	1.2	2.7	2.5
LUBRECHT FOREST # 3	5450	12/31	10	2.0	2.8	3.2
LUBRECHT FOREST # 4	4650	12/31	6	1.0	1.8	1.8
LUBRECHT FOREST # 6	4040	1/02	6	1.0	2.6	1.8
LUBRECHT HYDROPLOT	4200	12/31	9	1.6	4.0	2.7
LUPINE CREEK (WY)	7300	12/31	16	3.2	5.0	4.4
MADISON PLATEAU	7750	12/30	32	6.0	13.4	8.7
MADISON PLATEAU PILLOW	7750	12/30	SP	6.9	14.1	9.4
MARIAS PASS	5250	12/30	25	5.3	7.4	7.7
MAYNARD CREEK	6210	12/27	17	3.7	6.9	7.4
MAYNARD CREEK PILLOW	6210	12/27	SP	2.9	5.4	5.4
NOISY BASIN	6040	12/31	62	16.5	-	-
NOISY BASIN PILLOW	6040	12/31	SP	14.5	-	-
NORRIS BASIN (WY)	7500	1/01	16	2.5	4.9	4.6
NORTH FK. ELK CREEK	6250	1/02	15	2.9	5.9	5.6
NORTH FK. ELK CREEK PILL	6250	1/02	SP	2.2	5.4	4.7
NORTHEAST ENTRANCE	7400	12/31	17	2.6	4.0	3.6
NORTHEAST ENTRANCE PILL.	7400	12/26	SP	3.0	4.0	4.0
OPHIR PARK	7150	12/30	21	4.7	-	-
PETERSON MEADOWS	7200	12/26	15	3.2	5.8	-
PETERSON MEADOWS PILLOW	7200	12/26	SP	3.3	5.7	-
PICKET PIN LOWER	6200	1/02	7	1.7	.8	-
PICKET PIN MIDDLE	7250	1/02	26	6.6	3.6	-
PICKET PIN UPPER	8100	1/02	36	11.0	8.0	-
PIPESTONE PASS	7200	1/02	13	3.1	2.2	2.3
ROCKER PEAK	8000	12/26	23	4.9	7.0	6.8
ROCKER PEAK PILLOW	8000	12/26	SP	5.0	8.0	7.2
ROCKY BOY	4700	12/31	11	1.2	2.1	1.8
ROCKY BOY PILLOW	4700	12/31	SP	1.6	.8	1.4
SADDLE MOUNTAIN	7940	12/30	40	8.6	11.9	10.3
SADDLE MOUNTAIN PILLOW	7940	12/30	SP	9.3	15.6	11.6
SHOWER FALLS	8100	12/31	45	11.7	12.3	11.0
SHOWER FALLS PILLOW	8100	12/31	SP	11.6	11.3	11.5
SPUR PARK	8000	12/30	31	8.4	10.0	9.2
SPUR PARK PILLOW	8100	12/30	SP	9.0	11.9	10.2
STORM LAKE	7780	12/26	21	3.7	5.3	5.6
SUCKER CREEK	3960	12/31	0	.0	.2	-
SYLVAN PASS (WY)	7100	1/02	18	3.5	7.6	5.7
TAYLOR ROAD	4080	12/31	10	1.2	2.2	-
TEN MILE LOWER	6600	12/28	13	2.3	2.6	3.1
TEN MILE MIDDLE	6800	12/28	21	3.7	4.0	4.9
TEN MILE UPPER	8000	12/28	21	4.3	5.4	6.0
TEPEE CREEK	8000	1/02	29	6.2	8.2	-
TEPEE CREEK PILLOW	8000	1/02	SP	5.2	7.3	-
THUMB DIVIDE (WY)	7900	12/30	25	3.9	11.1	9.2
TV MOUNTAIN	6800	1/03	25	5.6	10.2	8.0
TWELVEMILE CREEK	5600	12/31	37	7.4	12.6	7.2
TWELVEMILE CREEK PILLOW	5600	12/31	SP	7.0	11.9	6.2





# SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
TWENTY-ONE MILE	7150	1/02	25	4.9	10.2	7.3
TWIN LAKES	6510	12/31	64	14.1	20.6	15.5
TWIN LAKES PILLOW	6400	12/31	SP	14.2	22.8	16.5
WEST YELLOWSTONE	6700	1/02	19	3.3	6.6	4.6
WEST YELLOWSTONE PILLOW	6700	1/01	SP	2.1	6.0	3.8
WHISKEY CREEK	6800	12/31	30	5.0	11.0	-
WHISKEY CREEK PILLOW	6800	12/31	SP	4.8	9.8	-
WHITE MILL	8700	12/26	32	7.6	12.4	-
WHITE MILL PILLOW	8700	12/26	SP	6.9	12.3	-
WILLOW CREEK	6500	12/24	16	3.3	-	-

## LATE ARRIVING DATA

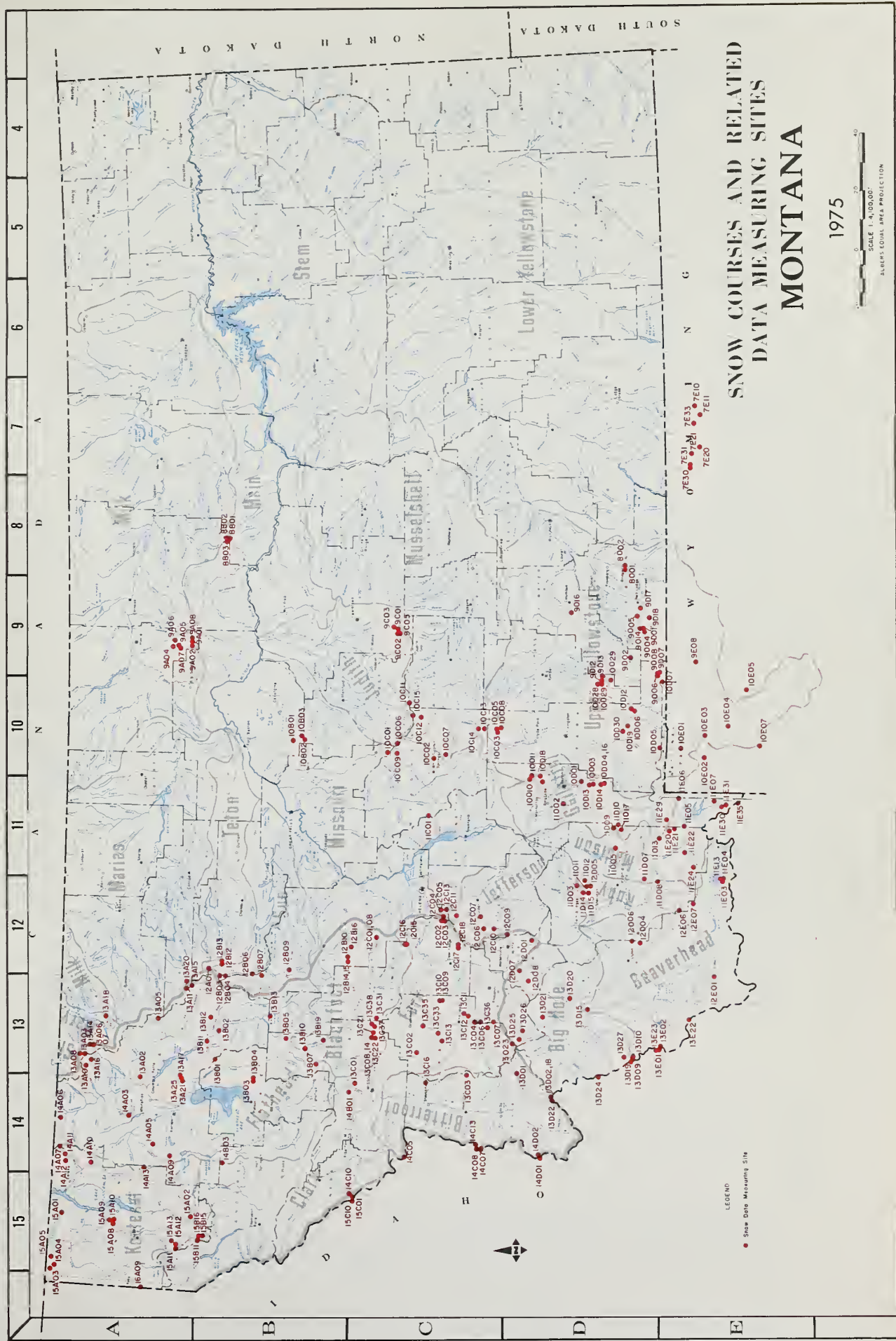
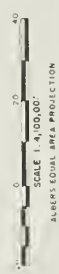
BIG SKY M.V.	7450	1/1	27	5.8	9.5	-
BIG SPRINGS (ID)	6500	12/30	32	5.0	10.6	7.8
CAMP CREEK (ID)	6800	12/31	19	3.8	4.6	4.3
DAVIS	5400	1/7	56	16.1	16.8	-
GARVER CREEK	4250	1/7	30	6.2	7.9	5.5
HAWKINS LAKE	6450	1/7	64	19.6	21.7	14.3
HOODOO BASIN PILLOW	6000	12/31	SP	18.1	-	19.1
ISLAND PARK (ID)	6310	12/30	30	4.4	8.8	6.1
LOLO PASS (ID)	5230	12/31	48	10.7	15.2	11.7
LONE MOUNTAIN	8880	1/1	37	8.0	-	-
LOOKOUT (ID)	5250	12/30	54	13.6	18.1	15.6
MARIAS PASS	5250	12/31	25	5.3	7.4	7.7
MOOSE CREEK (ID)	6200	1/2	28	5.2	9.7	5.6
SAVAGE PASS (ID)	6600	12/30	39	8.8	13.0	8.3
TARGHEE PASS (ID)	7000	12/30	24	3.7	6.3	6.5
TOGWOTEE PASS (WY)	9600	12/31	41	10.5	16.3	-
VALLEY VIEW (ID)	6500	12/30	24	3.5	7.4	6.3
WHITE ELEPHANT (ID)	7700	12/30	33	5.8	16.1	-





# SNOW COURSES AND RELATED DATA MEASURING SITES MONTANA

1975



Ordnance Mastin to Snow Course	Number of Snow Course	Elev.	Sec.	Twp.	Range	Addition to Snow Course 1/ Measuring Area 2/ By 3/	Meas- ured By 4/

[illegible]

1. Soil Conservation Service
2. Forest Service
3. Geological Survey
4. Montana Power Company
5. Bureau of Indian Affairs
6. National Park Service
7. U.S. Fish and Wildlife Service
8. U.S. Geological Survey
9. University of Montana School of Forestry
10. Department of Energy, Mines and America
11. Bureau of Sport Fisheries and Wildlife
12. Private Consultant
13. Montana Department of Conservation Officers
14. Montana Department of Fish and Game

[illegible]

# Agencies and Organizations Cooperating in Montana Snow Surveys

## GOVERNMENT AGENCIES

### Canada:

Water Survey of Canada, Calgary, Department of the  
Environment  
Water Resources Service, Department of Lands, Forests  
and Water Resources, British Columbia

### Federal:

Department of the Army  
Corps of Engineers  
U.S. Department of Agriculture  
Forest Service  
Soil Conservation Service  
U.S. Department of Commerce  
NOAA, National Weather Service  
U.S. Department of the Interior  
Bonneville Power Administration  
Bureau of Indian Affairs  
Bureau of Reclamation  
Bureau of Sports Fisheries and Wildlife  
Geological Survey  
National Park Service

## STATE

Montana Association of Conservation Districts  
Montana Department of Fish and Game  
Montana Department of Natural Resources and  
Conservation  
Montana Water Resources Board  
Montana State University - Agricultural Experiment  
Station  
North Montana Branch Station - Agricultural Exper-  
iment Station  
University of Montana - School of Forestry

## PRIVATE

Montana Power Company

Other organizations and individuals furnish valuable  
information for snow survey reports. Their cooperation  
is gratefully acknowledged.



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